

(12) **United States Patent
Binder**(10) **Patent No.: US 6,549,616 B1**
(45) **Date of Patent: Apr. 15, 2003**(54) **TELEPHONE OUTLET FOR
IMPLEMENTING A LOCAL AREA
NETWORK OVER TELEPHONE LINES AND
A LOCAL AREA NETWORK USING SUCH
OUTLETS**

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(75) Inventor: **Yehuda Binder**, Hod HaSharon (IL)(73) Assignee: **Serconet Ltd.**, Raanana (IL)

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(21) Appl. No.: **09/531,692**(22) Filed: **Mar. 20, 2000**(51) **Int. Cl.⁷** **H04M 11/00**(52) **U.S. Cl.** **379/90.01; 379/93.05**(58) **Field of Search** 379/93.05, 93.06, 379/93.08, 93.09, 93.28, 442, 399.01, 399.02(56) **References Cited**

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Primary Examiner—Stella Woo

(74) Attorney, Agent, or Firm—Browdy and Neimark

(57) **ABSTRACT**

A local area network using the telephone wiring within a residence or other building simultaneously with telephony signals, with network outlets having telephone and data connectors allowing connection of Data Terminal Equipment to the network. The network outlets use high pass filters to access the high-frequency band across the media, whereas the standard telephone service uses low pass filters to access the low-frequency voice/analog telephony band across the same media. The high pass filters of the network outlets at each segment end are connected to modems or other Data Communication Equipment, thus supporting data communication networks of various topologies, including point-to-point topologies. The invention also contemplates a network outlet having a data interface connector for allowing connection of Data Terminal Equipment thereto and having a telephone connector for connecting a standard telephone thereto. A splitter is adapted to be connected to a telephone line for separating data and telephone signals transported on the telephone line, whilst a coupler is adapted to receive telephone and data signals and feeds a composite signal at an output thereof to the telephone line.

20 Claims, 11 Drawing Sheets